

REMARKS

Applicants have carefully considered the March 17, 2005 Office Action regarding the above-identified application, and the amendments above together with these remarks are presented in a bona fide effort to address all issues raised in that Action. Minor changes to specification page 2 should improve grammar. Claims 1 and 8 have been amended to include limitations from claims 3 and 10 respectively, and thereby distinguish over art. Other minor changes are made to independent claims 1 and 8, for clarity and/or to broaden the claims somewhat on other points. Unless specifically relied on below in explaining a distinction over applied art, it is believed that the amendments to those independent claims are at least non-narrowing. Applicants also are submitting new claims 12-16, to pursue somewhat different scope of patentable claim coverage. Care has been taken to avoid entry of new matter. Claims 1, 2, 4-9 and 11-16 are pending in this case. For reasons discussed below, it is believed that this case is in condition for allowance, and prompt favorable reconsideration is solicited.

The Office Action rejected claims 1-6 under 35 U.S.C. §103 as unpatentable over Japanese publication JP 09-270,050 to Osawa in combination with Japanese publication JP 58-192,171 [actually 192,170] to Fukatsu. Claims 7-11 were rejected as unpatentable over Osawa and Fukatsu further in view of U.S. Patent No. 6,478,221 to Sommerville. These rejections are traversed, for reasons discussed in detail below.

Patentability of Claims 1, 2, 4-9, 11 and 12

Consider first independent claim 1. It is respectfully submitted that the proposed combination of Osawa and Fukatsu would not meet the limitations of the independent claim and thus would not render that claim or any of its dependent claims (2 and 4-7) unpatentable. Claim 1 specifies a shutter for opening or closing the media insertion/delivering port by being slid over

an opening of the media insertion/delivering port and a sensor mounted inside the media insertion/delivering port in a position higher than a height of the medium. It is believed that the combination of Osawa and Fukatsu does not disclose such an arrangement of the port, the cover and the sensor.

Osawa (JP-A-9-270050) discloses a technique involving extending the opening time (or delaying the closing) of the opening/closing part (shutter) of the money receiving port. A machine translation of the Osawa document, recently obtained from the Japanese Patent Office web site is enclosed for the Examiner's consideration. Apparently, the device of Osawa includes an opening and shutter, as well as a "payment opening sensor 110" that detects items in the payment opening, such as a customer's hand (see paragraphs [0015] and [0016] of the translation). Osawa provides only a block diagram illustration of the system elements (Fig. 1), and as such does not show any particular arrangement of the port, shutter and sensor. The so-called "shutter" 15 of Fukatsu (JP-A-58-192170) is the element that actually covers the entire customer accessing part (operation section) 3, including the keyboard 6 and the CRT display 7 (see Fig. 2). Fukatsu shows the bill dispensing port at 11. The sensor elements 16-18 are inside the access area 3 but not the dispensing port at 11.

In contrast, in the present disclosure, the shutter 4 is the shutter that slides over the opening of the port to open/close the insertion/delivering port 1. Hence, in claim 1, the shutter is one that is slid over an opening of the media insertion/delivering port, to open or close that port. The sensor is within the port, but the sensor is located at a position higher than a height of the medium.

In addressing original claim 3, the rejection contended that it would have been obvious to incorporate the sensor positioned higher than the position of the medium if the teachings of

Osawa and Fukatsu are considered in combination. Applicants disagree. In fact, the bill dispensing port 11 of Fukatsu is disposed on the vertical plane of the operation section 3 (see Figs. 2, 3 and 4), from which it is apparent that Fukatsu did not consider using our money insertion/delivering port 1 of the type which accepts bank bills inserted from above. In Fig. 2, it appears that the port 11 is higher than the elements 16, 17 forming the sensor. It therefore would not have been obvious to a person skilled in the art to mount a sensor in the port at a position higher than the height of the medium, even if the teaching of Fukatsu is considered. Further the words “money insertion port shutter 106” and “110 denotes a money insertion port sensor” are the only description found in Osawa referring to Fig. 1 (see paras. [0015] and [0016] of attached translation). Osawa is totally silent about actual implementation and the manner of mounting the shutter and sensor. Moreover, from the fact that Fukuoka’s element 3 is one that covers the entire customer accessing part (operation section) of the apparatus, it is apparent that it is not designed to take the height of the bank bills into account, and the sensor 18 is positioned at a location which is not considered in relation to the height of the bank bills into account. Hence, the combination of Osawa and Fukatsu would not provide an inserting/delivering port with a shutter to slide over its opening in combination with a sensor mounted inside the port but at a position higher than any medium that may be in the port.

In view of these distinctions of claim 1 from the actual teachings of Osawa and Fukatsu, it is submitted that claim 1 and dependent claims 2 and 4-6 are patentable.

The addition of a lighting device from Sommerville, as proposed in the rejection of claim 7, would not overcome the deficiencies of the combination of Osawa and Fukatsu. Since the combination relies on Osawa and Fukatsu for disclosure of a port, a cover, a sensor and related control features, it is believed that the combination with the further addition of a warning light

(Sommerville) would still not provide the recited arrangement of the port, the port closing/opening shutter and the sensor within the port at a position higher than the height of a medium. Hence, claim 7 should likewise be patentable over the art.

Consider now independent claim 8. The machine of claim 8 includes a media insertion/delivering port, a shutter to selectively cover an opening of the port and a sensor mounted inside the media insertion/delivering port in a position higher than a height of the medium. The sensor senses a position of an object higher than a position of the medium received into the media insertion/delivering port. It is respectfully submitted that the combination of Osawa, Fukatsu and Sommerville does not teach this claimed arrangement of the port, the shutter and the sensor.

As noted above, Osawa is silent as to the relation of the sensor to the port and shutter. As further explained above, the cover 3 of Fukatsu is not a shutter for covering an opening of the port to open or close the port itself. The cover 3 covers the entire customer access area. Fukatsu teaches placement of the sensor inside the access area but not any particular location based on the size of the medium. Hence, contrary to the art rejection, Fukatsu does not fairly suggest that the sensor is mounted inside the media insertion/delivering port in a position higher than a height of the medium. The rejection only alleges that Sommerville would make obvious the addition of a lighting device to provide visual guidance to a user. It is respectfully submitted that the combination of these teachings would not satisfy the claim recitations (e.g. of claim 8) regarding the arrangement of the port, shutter and sensor, particularly the requirement that the sensor is mounted inside the media insertion/delivering port (having its opening selectively covered by the shutter) in a position higher than a height of the medium. In view of these distinctions of claim 8

from the actual teachings of Osawa, Fukatsu and Sommerville, it is submitted that claim 8 and dependent claims 9 and 11 are patentable.

Applicants therefore request that the Examiner withdraw the art rejections with regard to claims 1, 2, 4-9, 11 and 12.

Patentability of New Claims 12-16

The new claims focus more on a different concept, to distinguish over the applied art. Independent claim 8 recites that the control unit is configured to detect a condition. The detected condition requires to elements, (1) that the sensor senses the object in the port, and (2) that this sensing occurs when the timer period reaches a predetermined value. In response to the detecting of this two-part condition, the control causes the shutter to move from a fully open position, that is to say, the recited movement starts only in response to occurrences of sensing an object in the port at a time when the timer has reached the predetermined value. The control also is configured to cause the shutter to move to a predetermined intermediate position that is between the fully open position and a fully closed position and to retract from the intermediate position without reaching the fully closed position. As recited, the intermediate position is determined by the configuration of the controller. It may be helpful at this point to consider the example provided by the disclosure, both to understand the concept and to appreciate the support provided by the specification.

The present application discloses a technique to use movement of the shutter to provide an advance notice of closing to a user (see abstract) but without closing the shutter on the user's hand (page 2, lines 1-21). Hence, when the timer reaches a predetermined value so that the controller would otherwise close the shutter over the port, the control determines whether the sensor detects an object such as the user's hand inside the media insertion/delivering port. If the

sensor detects no object at that time, the controller causes the shutter to fully close off the port (see e.g. page 9, lines 15-28). However, if the user's hand (or other object) is detected when the timer reaches the predetermined value, then the controller causes the shutter to move from the open position to an intermediate position at which the controller receives an indication that the sensor 5 senses a rear end of the shutter 4 (see Fig. 4 and the discussion in lines 1-16 of page 10). Then, the shutter 4 is opened to a position of its mechanical limit. The control unit is configured to later cause the shutter 4 to move to the fully closed position, when the object is later removed from the port (page 10, lines 17-28). This advance notice technique is not suggested by any of the applied documents, and the new claims recite distinctions over the combinations of those documents, as discussed below.

The art rejections relied on teachings of Fukatsu to allegedly suggest movement of the cover to an intermediate position. It is respectfully submitted, however, that Fukatsu and thus any combination that relies on such a teaching from that document would not satisfy the shutter control requirements recited in new independent claim 12.

At least as interpreted by in the rejections, Fukatsu stops or reverses movement of the cover 3 upon detecting an object. Hence, if the object is already in the port when time expires, the shutter does not move ("is stopped" in the English abstract). If the port is clear of the object when the time expires, the control starts to close the shutter, but it would "reverse" the shutter movement if an object is newly inserted into the port before closure is complete. The Examiner apparently interpreted the point of reversal as an intermediate point.

As noted above, new independent claim 12 requires that the control unit detects a condition in which the sensor senses the object in the port **when** the timer period reaches a predetermined value. Instead of preventing movement of the shutter under those circumstances

as in Fukatsu, claim 12 requires that the control responds thereto by causing the shutter to move from the fully open position to the predetermined intermediate position (even though the object is in the port) and to retract from the predetermined intermediate position without reaching the fully closed position. It is submitted that Fukatsu does not teach moving the shutter from the fully open position when both aspects of the condition are true at the same time, that is to say when the object is sensed as being already present in the port at the time when the timed period reaches its predetermined value. Any combination that uses the Fukatsu operation would prevent (stop) any movement from the fully open position if the sensor detects an object in the customer access area when the timer times out.

It is further submitted that Fukatsu moves the shutter only until detection of a newly inserted object. In any combination that relies on such a teaching of Fukatsu, the intermediate position if any is determined by the time when the user inserts the object, not “predetermined” by configuration of the control unit as recited in new claim 12.

Since none of the proposed combinations would meet the control limitations of new claim 12, claim 12 and dependent claims 13-16 should be patentable over the art applied in the rejections.

Conclusions

Upon entry of the above claim amendments, claims 1, 2, 4-9 and 11-16 are active in this application, all of which should be in condition for allowance. Accordingly, this case should now be ready to pass to issue; and Applicants respectfully request a prompt favorable reconsideration of this matter.

It is believed that this response addresses all issues raised in the March 17, 2005 Office Action. However, if any further issue should arise that may be addressed in an interview or by

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an Examiner's amendment, it is requested that the Examiner telephone Applicants' representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

A handwritten signature in black ink, appearing to read "Keith E. George", with a stylized flourish at the end.

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